

### **Remarks**

The Applicant respectfully requests reconsideration of the present U.S. Patent application as amended herein. Claims 1, 12, and 23 have been amended. No claims have been added, cancelled, or withdrawn. Thus, claims 1-33 remain pending in the application.

#### Claim Rejections § 112

Claims 1-33 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Office action draws the Applicant's attention to claim limitations in independent claims 1, 12, and 23 that were directed to "selecting one of the at least two sequences of predetermined reference times." The Applicant has amended claims 1, 12, and 23 to more clearly recite embodiments of the invention. The amended claims no longer include the claim limitations directed "selecting one of the at least two sequences of predetermined reference times." Thus, the Applicant respectfully requests that the rejection of claims 1-33 be withdrawn.

Claims 1-11 were rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential steps. In particular, the Office action draws the Applicant's attention to claim limitations in independent claims 1, 12, and 23 that were directed to "selecting one of the at least two sequences of predetermined reference times." The Applicant has amended claim 1 to more clearly recite embodiments of the invention. The amended claims no longer include the claim limitations directed

“selecting one of the at least two sequences of predetermined reference times.” Thus, the Applicant respectfully requests that the rejection of claims 1-11 be withdrawn.

### Claim Rejections § 103

Claims 1-4, 7-11, 12-15, 18-22, 23-26, and 29-33 were rejected under 35 U.S.C. § 102(e) as being unpatentable over published U.S. Patent Application No. 2003/0043926 filed by Terashima et al. (*Terashima*). The Applicant respectfully submits that claims 1-4, 7-11, 12-15, 18-22, 23-26, and 29-33 are patentable over *Terashima* for at least the reasons set forth below.

Amended claim 1 recites:

A method comprising

receiving a clock signal;  
skewing a phase of the clock signal with a series of delay elements to generate a plurality of sequences of predetermined reference times that are skewed with respect to one another by a predetermined amount;  
establishing at least two of the plurality of sequences of predetermined reference times on respective ones of at least two communication lines, at least some of the reference times of at least one of the sequences occurring out-of-phase with at least some of the reference times of another of the sequences; and  
encoding digital data onto data signals on one or more communication lines such that a time difference between at least one of the data signals and the nearest one of the reference times on one of the communication lines is smaller than the time difference between the same data signal and the nearest one of the reference times on another one of the communication lines.

(Emphasis added). Amended independent claims 12 and 23 are, respectively, apparatus and system claims that include substantially similar limitations to those of claim 1.

Regarding the independent claims, the Office action directs the Applicant’s attention to FIGs. 3 and 4 of *Terashima*. FIGs. 3 and 4 illustrate a signal transmission system that includes “timing adjustment circuits … which adjust the signal latch timing

for the respective receiving circuits” (see, e.g., [0070]). In particular, **timing adjusting codes are used to adjust the timing of the clocks** (see, e.g., [0071]). Thus, FIGs. 3 and 4 are directed a system in which the clock signal is adjusted to provide “optimal timing according to the signal skew occurring between the respective signal lines” (see, e.g., [0070]).

*Terashima* does not disclose, however, “**selecting one of the at least two sequences of predetermined reference times** based, at least in part, on a time difference between digital data and a selected sequence of predetermined reference times,” as recited in independent claims 1, 12, and 23. For at least the reason that *Terashima* does not disclose these limitations, *Terashima* cannot anticipate claims 1, 12, and 23. Thus, the Applicant respectfully requests that the rejection of claims 1, 12, and 23 be withdrawn.

Claims 2-4 and 7-11 depend from claim 1. Claims 13-15 and 18-22 depend from claim 12. Claims 24-26 and 29-33 depend from claim 23. For at least the reason that dependent claims include the limitations of the claims from which they depend, the Applicant respectfully submits that claims 2-4, 7-11, 13-15, 18-22, 24-26 and 29-33 are not anticipated by *Terashima*.

### Claim Rejections § 103

Claims 5, 6, 16, 17, 27, and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Terashima* in view of U.S. Patent No. 6,463,092 issued to Kim et al. (*Kim*). Claims 5 and 6 depend, directly or indirectly, from claim 1 and include the limitations of claim 1. Claims 16 and 17 depend, directly or indirectly, from claim 12

and include the limitations of claim 12. Claims 27 and 28 depend, directly or indirectly, from claim 23 and include the limitations of claim 23. For at least the reasons shown below, the Applicant respectfully submits that claims 5, 6, 16, 17, 27, and 28 are patentable over *Terashima* in view of *Kim*.

*Kim* is cited as disclosing that “the data signals comprises one of multiple potential amplitude levels between predetermined time locations of rising or falling transitions of digital signals.” Whether or not *Kim* discloses the limitations cited by the Office action, it does not teach or suggest “**selecting one of the at least two sequences of predetermined reference times** based, at least in part, on a time difference between digital data and a selected sequence of predetermined reference times,” as recited in independent claims 1, 12, and 23. Because neither *Terashima* nor *Kim* teach or suggest the above-cited claim limitations, no combination of *Terashima* and *Kim* teaches or suggests the invention as claimed in claims 1, 12, and 23. For at least the reason that dependent claims include the limitations of the claims from which they depend, the Applicant respectfully submits that claims 5, 6, 16, 17, 27, and 28 are patentable over *Terashima* in view of *Kim*.

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### **Conclusion**

The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

Respectfully submitted,

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